

Current Conditions Report #20170713

July 13, 2017

Summary: Based on climate predictions and field observations, the threat for mass coral bleaching in southeast Florida between Miami-Dade and Martin counties is **LOW** as of July 13, 2017.

Environmental Monitoring

Climate predictions for this current conditions report are based on NOAA’s Coral Reef Watch (CRW) satellite imagery products, which summarize sea surface temperature (SST) data and provide an indication as to when conditions are favorable for coral bleaching. The current CRW 5-kilometer (km) Coral Bleaching Alert Area indicates that the southeast Florida region is presently experiencing low to moderate thermal stress (Figure 1):

- NOAA’s experimental 5-km Bleaching Hotspot Map (Figure 2) compares current SST to the maximum monthly mean, which is the average temperature during the warmest month of the year. Corals start to become stressed when SST is 1°C greater than the highest monthly average. Currently, SST is slightly elevated in Miami-Dade and into Broward counties.
- Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA’s experimental 5-km Degree Heating Weeks (DHW) Map (Figure 3) shows the accumulation of temperature stress over the previous 12 weeks, with 1 DHW equal to one week at 1°C greater than the maximum monthly mean. Currently, this map indicates that there is slight accumulated temperature stress in lower Miami-Dade County.
- Near real-time data from CRW’s new 5-km Satellite Regional Virtual Station for southeast Florida indicates that SST in the region is slightly above the monthly average, although it remains below the bleaching threshold (Figure 4).

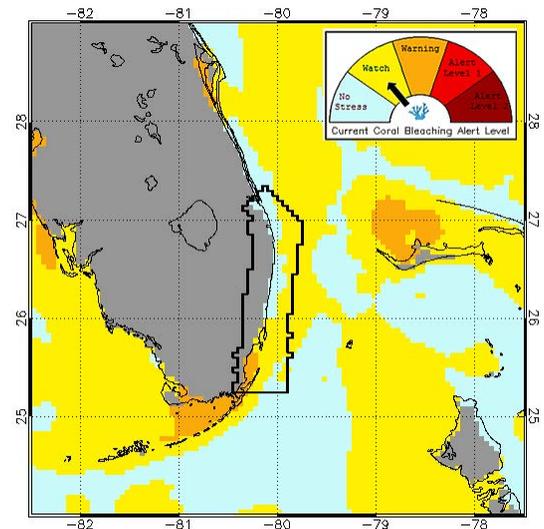


Figure 1. NOAA Coral Reef Watch Bleaching Alert Area for July 12, 2017.
https://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

The Florida Department of Environmental Protection’s Coral Reef Conservation Program staff will continue to monitor NOAA’s Hotspot, DHW and Alert Area maps, as well as Virtual Station data for the remainder of the summer bleaching season.

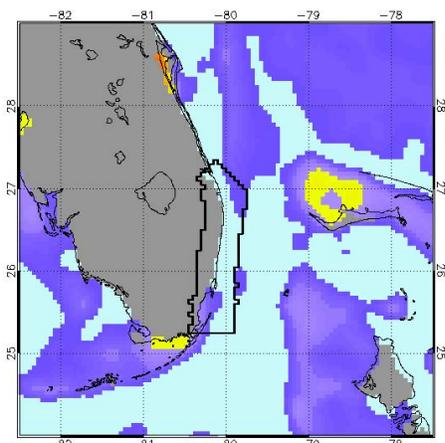


Figure 2 (left). NOAA CRW Hotspots for July 12, 2017.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

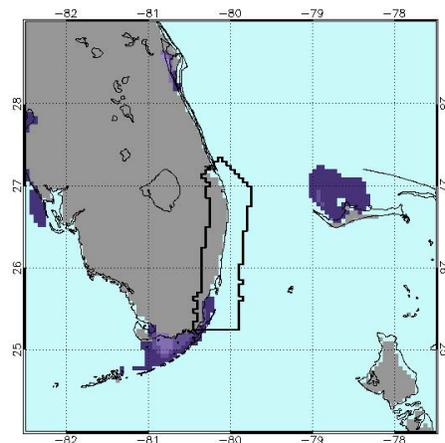
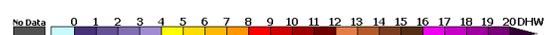


Figure 3 (right). NOAA CRW Degree Heating Weeks for July 12, 2017.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>



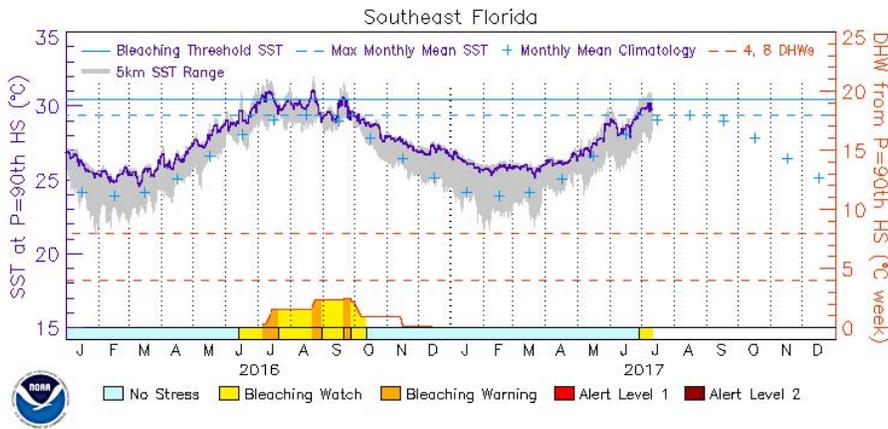


Figure 4. NOAA CRW Virtual Station Data; January 1, 2016 – July 12 2017.
http://coralreefwatch.noaa.gov/vs/gauges/southeast_florida.php

Observer Network

A total of 19 BleachWatch reports were received since June including 14 from Broward County and 5 from Palm Beach County. Of these, 8 indicated observations of bleaching. Of the bleaching reports, 7 came from Broward County. Majority, indicated partially bleaching with 1-10% of the coral cover being affected with one report indicating 31-50% being affected. Three reports also noted signs of coral disease and one indicated recent mortality,

which was likely in association with the disease outbreak.

Corals exhibiting signs of thermal stress were observed in a broad depth range (10-70 ft) in Broward County and shallow waters in Palm Beach County. Water temperatures varied from 78-80°F at the beginning of June and then by July, temperatures were reported as high as 81-84°F depending on the depth. Bleaching reports indicated two groups of coral being affected including Encrusting/Mound/Boulder and Leaf/Plate/Sheet. Single observations of bleaching were also noted on Brain, Branching and Flowering/Cup corals. Several observers noted coral disease, particularly on Mound/Boulder and Brain corals including *Montastraea cavernosa* and *Diploria labyrinthiformis*.

These isolated reports from June and July combined with NOAA's CRW SST projections may indicate the presence of a mild bleaching event in southeast Florida. Water temperatures are warm enough for corals to undergo stress, particularly in Miami-Dade and Broward counties. If conditions continue to worsen through the region, widespread bleaching will be likely.

The BleachWatch Observer Network is encouraged to continue submitting observations on coral condition after every visit to the reef throughout the bleaching season. **Remember, reports of 'No Bleaching' are just as important as bleaching reports!** Please also note any coral diseases you observe! To submit a report on coral condition in southeast Florida, or for more information on the SEAFAN BleachWatch program, please visit www.SEAFAN.net and click "BleachWatch".



Figure 5. A partially bleached colony of *Stephanocoenia intersepta* on 7/25/2017 in Broward County. Photo credit: Nikole Ordway.

For more information about SEAFAN BleachWatch or to organize a training session for your group to become a part of the Observer Network, please contact the Program Coordinator below.

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Program Partners

